S/856/62/000/000/001/011
E073/E535

AUTHORS: Lazarenko, B.R. and Lazarenko, N.I.

TITLE: Electrodynamic theory of the electric-spark erosion of metals

SOURCE: Problemy elektricheskoy obrabotki materialov. Tsentr. nauchnoissl. labor. elek. obrab. mat. AN SSSR. Ed.by B. R. Lazarenko. Moscow, Izd-vo AN SSSR, 1962,44-51

TEXT: In the first part of the paper the various published theories on the process of electric-spark erosion are reviewed. Recent experimental results mentioned include the following: G. V. Spivak established,by electron microscope studies, intensive refining and deformation of metal crystals in the zone of the electric impulse; L. S. Palatnik showed,by X-ray diffraction methods,that explosive evaporation occurs on the cathode, which is accompanied by mechanical failure, whilst relatively static fusion takes place at the anode; B. N. Zolotykh showed,by high-speed cinematography,that the ejection of the metal occurs after termination of the electric processes; B. I. Stavitskiy established a very interesting dependence between the characteristics of the

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electric pulse and the geometrical dimensions of the formed pit; I. Z. Mogilevskiy and A. R. Kutsar found conclusively that the erosion products contain material from both electrodes. None of the theories completely fits all the experimental results and therefore a new theory is proposed. This theory is based on numerous analogies between the crater on a metallic surface produced by an electric spark discharge and pictures of moon craters produced by meteoritic impact, as well as pictures of metallic targets hit by projectiles with velocities so great that both the target and the projectile are broken up by the force of impact as though they were liquid. The electrodynamic theory proposed here explains all the hitherto observed phenomena of spark erosion. It was known earlier that a high-speed impact on a solid metallic surface by material in any aggregate state would cause an ejection of material in accordance with the same mechanism; this mechanism also applies when a solid metallic surface is hit by material in the plasma state. To prove the analogy, a sequence of high-speed photographs of the impact of a spark discharge on the surface of a liquid anode (acidic water) is reproduced in the paper. These photographs show that after

Electrodynamic theory of the ... S/856/62/000/000/001/011
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breakdown of the gap, a crater is formed on the surface of the anode caused by the sharp braking effect of the electron beam, and from the edges of the crater material is ejected at a high velocity. The author mentions that his theory also explains the "mystery" of the Tungusska meteorite. There are 5 figures.

Card 3/3

LAZARENKO, B.R.

New uses of electric power in industry and agriculture. Izv. AN Mold. SSR. no.3:3-15 '63. (MIRA 17:12)

L 21664-66 EWT(m)/ETC(f)/EWG(m)/T DS
ACC NR: AP6000639 SOURCE CODE: UR/0407/65/000/001/0072/0073

AUTHOR: Lazarenko, B. R. (Kishinev); Fursov, S. P. (Kishinev); Faktorovich, A. A. (Kishinev)

ORG: none

TITLE: Electrochemical pressure sensor

SOURCE: Elektronnaya obrabotka materialov, no. 1, 1965, 72-73

TOPIC TAGS: pressure measurement, gas pressure sensor, manometer

ABSTRACT: A two-electrode closed electrolytic cell (a 0.07-mm platinum wire serves as one of the electrodes) with a compressed gas over the electrolyte is recommended for measuring the gas pressure. Experiments carried out at 0—3 atm pressure and at 200—760 torr vacuum exhibited a clear relation between the gas pressure and the effective current flowing in a simple RL circuit. The advantages of the device are: simplicity, multipurpose feature, and strong direct electric signal. Disadvantage: effect of electrolyte temperature on the current. Orig. art. has: 2 figures and 2 formulas.

SUB CODE: 13, 09 / SUBM DATE: none / ORIG REF: 003 / OTH REF: 003

Card 1/1

ACC NR: AP6033845 SOURCE CODE: UR/0117/66/000/008/0026/0028

AUTHOR: Lazarenko, B. R. (Academician AN MolSSR, Professor, State prize winner, Doctor of technical sciences)

ORG: none

TITLE: Electronic machining of metal-cutting tools

SOURCE: Mashinostroitel', no. 8, 1966, 26-28

TOPIC TAGS: electrospark machining, electroerosion machining, electroerosion, machine tool, alloy/ T15K6 alloy, 4531 machine tool, 4531P machine tool, A.207.13/20 machine tool, LKZ-37 machine tool, A.207.23 machine tool

ABSTRACT: This paper surveys the methods and equipment for electroerosion machining of metal-cutting tools by means of an unprofiled machining electrode and direct copying. When an unprofiled electrode is used, there are three methods for automatic movement of the part relative to the machining electrode. The technical specifications of the 4531 and 4531P electroerosion machines, which use an unprofiled electrode, are given. The model A.207.13/20 electroerosion machine, which uses both an unprofiled electrode and direct copying, is described. The LKZ-37 electroerosion machine, specially designed for sharpening cutting tools, is also described. The 4531P is equipped with programmed control. The technical specifications of the

Card 1/2 UDC: 621.9.048.7:621.9.02

ACC NR: AP6033845

A.207.23, which also uses both methods, are given. These machines can cut hard alloys at a rate of 200 to 0.7 mm^3/min with a surface roughness of ▽5-- ▽9. Orig. art. has: 6 photographs and 1 diagram.

SUB CODE: 13/ SUBM DATE: none

Card 2/2

ACC NR: AP7001191 SOURCE CODE: UR/0407/65/000/05-/0019/0022

AUTHOR: Lazarenko, B. R. (Kishinev); Fursov, S. P. (Kishinev)

ORG: none

TITLE: Gas-turbine electric pulse generators

SOURCE: Elektronnaya obrabotka materialov, no. 5-6, 1965, 19-22

TOPIC TAGS: ~~electric pulse~~ / ~~electric~~ electric equipment pulse generator, ~~rotary pulse generator~~, gas turbine, ~~pulse generator~~, electrospark machining

ABSTRACT: The Institute of Applied Physics of the Academy of Sciences of Moldavian SSR has designed and built a new type commutating device for generators of electric sparks used in machining materials. The device combines the drive of a gas turbine (see Fig. 1) and a commutator which serves as turbine rotor disc 1 whose teeth during rotation contact commutating electrodes 2 and 3 and alternately close and open the spark generator circuit. The turbine is driven by a gas jet from nozzle 4; the commutator body (5) is made from an insulator material. The commutating electrodes are in the expansion zone of the exhaust gas, which ensures a satisfactory de-ionization of the spark gaps and also reliable and rapid extinction of the incidental arc discharge. An improved two-circuit design of the generator has two turbine discs mounted on a single shaft and electrically insulated from each other. The blades of the discs are straddled in relation to each other. The generator is supplied

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with industrial alternating current whose voltage is raised to several kilovolts by a transformer. The current is then rectified and fed to the spark generator.

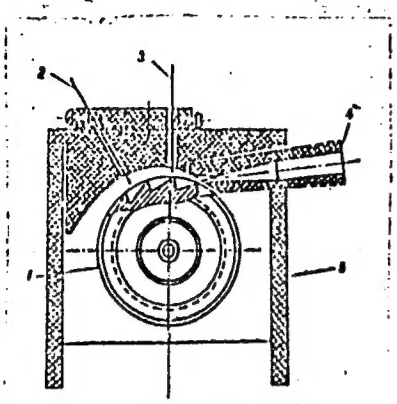


Fig. 1. Layout of a gas-turbine spark generator

1 - Turbine disc; 2 and 3 - pairs of commutating electrodes; 4 - nozzle; 5 - commutator body.

The pulse frequency is determined from the formula $f = mnz/60$, where n is the RPM of the turbine rotor, m is the number of the circuits, and z is the number of the commutator teeth. The gas-turbine pulse generator is small in size and weight and very stable in operation. The pulse frequency is easily controlled within wide limits. Orig. art. has: 3 figures. [MS]

SUB CODE: 09, 21 SUBM DATE: none/ ORIG REF: 006/ OTH REF: 003/ ATD PRESS: 5110

LAZARENKO, Erik

Contact metamorphism in the Vyshkovo region. Geol. sbor. [Lvov] no.4:182-183 '57. (MIRA 13:2)

1.Ekspeditsiya Ukrainskogo geologicheskogo Upravleniya, Beregovo.
(Vyshkovo region (Transcarpathia)--Rocks, Crystalline and metamorphic))

LAZARENKO, E.

Geochemistry of tellurium in Transcarpathian altered rocks.
Probl.geokhim. no.1:272-279 '59. (MIRA 13:7)
(Transcarpathia--Tellurium)

LAZARENKO, E.A. (SSSR)

Geology of Carpathian klippe zones. Mat.Karp.-Balk.assots. no.1:177-184 '60. (MIRA 14:12)
(Carpathian Mountains—Geology)

LAZARENKO, E.A.; SLIVKO, M.M.

Zeolites of Transcarpathia. Min. sbor. no.15:262-276 '61. (MIRA 15:6)
(Transcarpathia--Zeolites)

LAZARENKO, Ye.L., prof.; LAZARENKO, E.A.; BARYSHNIKOV, E.K.; MALYGINA, O.A.; FURMAN, K.P., red.; SARANYUK, T.V., tekhn. red.

[Mineralogy of Transcarpathia] Mineralogiia Zakarpat'ia. [By] E.K.Lazarenko i dr. L'vov, Izd-vo L'vovskogo univ., 1963. 614 p. (MIRA 17:3)

LAZARENKO, E.A. [Lazarenko, E.O.]

Two genetic types of secondary quartzites. Dop. AN URSR no.6: 811-814 '63 (MIRA 17:7)

1. Ukrainskiy nauchno-issledovatel'skiy gornorudnyy institut. Predstavleno akademikom AN UkrSSR. N.P.Semenenko [Semenenko, M.P.].

AYZENBERG, D.Ye.; BELEVTSEV, Ya.N.; BORDUNOV, I.N.; BORISENKO, S.T.; BULKIN, G.A.; GORLITSKIY, B.A.; DOVGAN', M.N.; ZAGORUYKO, L.G.; KAZAKOV, L.R.; KALYAYEV, G.I.; KARASIK, M.A.; KACHAN, V.G.; KISELEV, A.S.; LAGUTIN, P.K.; LAZARENKO, Ye.K.; LAZARENKO, E.A.; LAPITSKIY, E.M.; LAPCHIK, F.Ye.; LAS'KOV, V.A.; LEVENSHTEYN, M.L.; MALAKHOVSKIY, V.F.; MITKEYEV, M.V.; PRUSS, A.K.; SKARZHINSKIY, V.I.; SKURIDIN, S.A.; SOLOV'YEV, F.I.; STRYGIN, A.I.; SUSHCHUK, Ye.G.; TEPLITSKAYA, N.V.; FEDYUSHIN, S.Ye.; FOMENKO, V.Yu.; SHKOLA, T.N.; SHTERNOV, A.G.; YAROSHCHUK, M.A.; ZAVIRYUKHINA, V.N., red.

[Problems of metallogeny in the Ukraine] Problemy metallogenii Ukrainy. Kiev, Naukova dumka, 1964. 254 p. (MIRA 18:1)

1. Akademiya nauk URSR, Kiev. Instytut geologichnykh nauk.

ACC NR: AP7001555 SOURCE CODE: UR/0020/66/171/003/0679/0682

AUTHOR: Lazarenko, E. A.

ORG: Institute of Mineral Resources (Institut mineral'nykh resursov)

TITLE: Metallogenic subdivision of the Carpathian region

SOURCE: AN SSSR. Doklady, v. 171, no. 3, 1966, 679-682

TOPIC TAGS: mineral, economic geology, map, MINERALOGY / CARPATHIAN REGION

ABSTRACT: Intra-Carpathian endogenic ore deposits comprise two periods of geosynclinal development: Paleozoic, apparently including the lower part of the Triassic and ending with Hercynian folding, and the Alpine, including the Mesozoic and Cenozoic. Ores are thus pre-Alpine or Alpine in age. A map is supplied to show the distribution of rock types and metallogenic zones. The pre-Alpine ores are of spotty composition and are of various types, including almost all types occurring in fold zones. These include iron-ore skarns, sulfide ores, and numerous vein deposits: quartz-tin, lead-zinc, arsenic with gold, quartz with ferberite, scheelite, arsenopyrite, and chalcopyrite with nickel and admixtures of cobalt and bismuth. Copper ores and micaceous pegmatities are also found. Alpine ores, associated in great part with volcanic and intrusive rocks, include iron-ore skarns with hematite, pyrite, chalcopyrite, scheelite, molybdenite, natural bismuth, sphalerite, and galena, and hydrothermal veins with pyrite, chalcopyrite, hematite, and nickeliferous pyrrhotite.

UDC: 553.3

Card 1/2

ACC NR: AP7001555

Host rocks are commonly propylitized dacites, andesites, granodiorite porphyries, and diorites, rarely rhyolites and rhyolite tuffs. This paper was presented by Academician V. I. Smirnov on 06 April 1966. Orig. art. has: 1 figure.

SUB CODE: 08/ SUBM DATE: 04Apr66/ ORIG REF: 004/ OTH REF: 011

Card 2/2

LAZARENKO, F.D.

Multidirectional button type buzzer. Avtom., telem.i sviaz 2 no.4:29-30 Ap '58. (MIRA 12:12)

1. Starshiy inzhener Sukhumskoy distantsii svyazi Zakavkazskoy dorogi.
(Railroads--Telephone)

LAZARENKO, F.D.

Diagram connecting the dispatcher circuits. Avtom.telem. i sviaz' 3 no.1:33-34. Ja '59. (MIRA 12:1)

1. Starshiy inzh. Sukhumskoy distantsii signalizatsii i svyazi Zakavkazskoy dorogi.
(Railroads--Train dispatching)

LAZARENKO, G. P.

"Magnetic Pulsations at Keles," Trudy Tashkent Geofiz. Obs., No.4 (5), 1950

Translation 563445

PA 237T73

LAZARENKO, G. P.

USSR/Geophysics - Hydrometeorological Museum Dec 52

"Hydrometeorological Museum in Tashkent," G. P. Lazarenko, Meteorol Station, Tashkent Observ

"Meteorol i Gidrol" No 12, p 54

The hydromet museum was created in 1948 as a part of the Tashkent Geophys Observatory in order to popularize hydromet sci among the people. This expt at Tashkent Geophys Observatory has been successful.

237T73

LAZARENKO, G.P.

Climatic characteristics of the Aktash Health Resort. Sbor. trud.Uz.gos.nauch.-issl.inst.kur.i fizioter. 17:54-66 '62.

Biomicroclimatic zones of the "Pobeda" Park Forest in Tashkent. Ibid.:172-177 (MIRA 17:7)

LRYNKIN, A.P.; LAZARENKO, G.P.

Climatic conditions in areas of Surkhan-Darya Province, Uzbek S.S.R. Sbor.trud.Uz.gos.nauch.-issl.inst.kur. i fizioter. 17: 23-31 '62.

Prospects for organizing large-scale workers' rest areas near the Uzbekistan reservoirs. Ibid.: 32-39 (MIRA 17:7)

LAZARENKO, I.

Keeping records and settling accounts in cattle trade can be simplified. Mias.ind. SSSR 27 no.1:42-45 '56. (MLRA 9:6)

1.Glavnyy bukhgalter syr'yevogo upravleniya Moskovskogo myasokombinata.
(Meat industry--Accounting)

DOROKHOV, A.; LAZARENKO, I.; SHURAPEY, G.

Change the conditions of livestock reception at meat combines. Mias.ind.SSSR 30 no.2:24-25 '59. (MIRA 13:4)

1. Moskovskiy myasokombinat imeni A.I.Mikoyana.
(Moscow--Meat industry)

ACC NR: AP6036775 SOURCE CODE: UR/0223/66/000/011/0044/0048

AUTHOR: Lazarenko, I.

ORG: none

TITLE: For you, man ["Interorgtekhnika" exposition in Moscow]

SOURCE: Avtomatika, telemekhanika i svyaz', no. 11, 1966, 44-48

TOPIC TAGS: automatic control equipment, digital computer system, digital computer

ABSTRACT: A review is given of some exhibits at the "Interorgtekhnika-66" exposition, held 2-15 September 1966 in Moscow. This was an international display of the latest in data processing, automatic control, and computer equipment from some 1000 manufacturers in 18 countries. Soviet equipment displayed included the Nairi, Minsk-22, Ural-11, Razdan-3, and Gamma-30 digital computers, which have capabilities of 10,000 to 100,000 operations/sec. The Vega, a desk calculator, was introduced as the first to feature automatic decimal point positioning. A long-range control network was demonstrated by the Italian Olivetti-GE firm, using a Minsk-22 computer with Olivetti input/output hardware; the network comprised telephone ties between Moscow, Kiev, Budapest, Vienna, and Milan. This system, transmitting information at 1200 baud/sec, was used to simulate remote solution of industrial problems such as inventory adjustment and materials routing. Another system, the USSR's Vremya, for automatic control of serial factory production, was shown; this enables materials

UDC: 065.4:05.011.5

Card 1/2

ACC NR: AP6036775

control on both an intraplant and inter-plant basis. A basic unit of the Vremya system, not otherwise described, is identified by the name Sovyetchik. East Germany introduced the Robotron-300, a new stored-program data processer using punch-card input and printed or punch-card output. A large portion of the exhibit was devoted to document duplication or conversion equipment. The Soviet EKA-2 copier is cited, which reduces the text to film and then provides printouts at a rate of 100/min. Orig. art. has: 7 figures.

SUB CODE: 09/ SUBM DATE: none/ ATD PRESS: 5106

Card 2/2

LAZARENKO, I.F., inzh.

Rapid manway cutting near gravity inclines. Shakht. stroi. (MIRA 11:6)
no.6:26 '58.

1.Trest Krasnoarmeyskshakhtostroy.
(Mining engineering)

LAZARENKO, I.L.

Electronics in the service of railroad passengers. Avtom., telem. i sviaz' 9 no.10:43-44 O '65. (MIRA 18:11)

LAZARENKO, Il'ya Mikhaylovich; KASHMANOV, Vladimir Nikolayevich

[Wages and the standardization of the labor of workers in automotive transportation] Oplata i normirovanie truda rabochikh avtomobil'nogo transporta. Moskva, Profizdat, 1959. 145 p. (MIRA 14:2)
(Wages) (Transportation, Automotive)

LAZARENKO, I.M.

Wages for truck drivers. Sov. profsoiuzy 19 no.21:42-44 N '63. (MIRA 17:1)

1. Zaveduyushchiy sektorom otdela proizvodstvenno-massovoy raboty i zarabotnoy platy Vsesoyuznogo tsentral'nogo soveta professional'nykh soyuzov.

SHKOL'NIKOV, S., inzh.; LAZARENKO, K., inzh.

Modernization of the RMZ and "Staryi Burlak" steam cranes. Rech. transp. 20 no. 3:43-45 Mr '61. (MIRA 14:5)

1. Verkhne-Dneprovskoye parokhodstvo.
(Cranes, derricks, etc.)

PYATETSKIY, V.Ye. [P'iatets'kyi, V.IU.]; LAZARENKO, K.A. [Lazarenko, K.O.]

Testing barge models with simplified hull lines. Visti Inst. hidrol. i hidr. AN URSR 22:107-113 '63. (MIRA 18:11)

LAZARENKO, L.A. [Lazarenko, L.O.]

Polarization coefficients in reactions of the photoproduction of pseudoscalar particles on a nucleon. Ukr.fiz.zhur. 10 no.10:1056-1064 O '65. (MIRA 19:1)

1. Fiziko-tekhnicheskiy institut AN UkrSSR, Khar'kov.
Submitted October 26, 1964.

LAZARENKO, L.I., assistent

Vascular reactions in kidney diseases. Med.zhur.Uzb. no.6: 50-54 Je '58. (MIRA 13:6)

1. Iz kafedry gospital'noy terapii lechebnogo fakul'teta (zav. - chlen-korrespondent AMN SSSR R.I. Umidova) Tashkentskogo gosudarstvennogo meditsinskogo instituta.
(BLOOD VESSELS) (KIDNEYS--DISEASES)

LAZARENKO, L.I.

Comparative evaluation of hemodynamic changes in kidney diseases and hypertension. Izv.AN Uz.SSR.Ser.med. no.6:69-72 '58. (MIRA 12:5)

1. Tashkentskiy gosudarstvennyy meditsinskiy institut, Kafedra gospital'noy terapii lechebnogo fakul'teta.
(KIDNEYS--DISEASES) (HYPERTENSION) (BLOOD--CIRCULATION)

LAZARENKO, L.I., assistent

Study of vascular reactions in hypertension. Med.zhur.Uzb. no.7:8-14 Jl '58. (MIRA 13:6)

1. Iz kafedry gospital'noy terapii lechebnogo fakul'teta (zav. - chlen-korrespondent AMN SSSR Z.I. Umidova) Tashkentskogo gosudarstvennogo meditsinskogo instituta.
(HYPERTENSION) (BLOOD VESSELS)

LAZARENKO, L. I.: Master Med Sci (diss) -- "Functional disturbance of blood circulation in nephritis and hypertension, taking into account climatic conditions". Tashkent, 1959. 15 pp (Tashkent State Med Inst, Inst of Regional Med of the Acad Sci Uzbek SSR), 230 copies (KL, No 13, 1959, 112)

UMIDOVA, V.I., prof.; INOYATOVA, L.Kh.; LAZARENKO, L.I.

Study of the lipid level in the blood of healthy inhabitants of a rural locality and of those suffering from arteriosclerosis; results of expedition work in some Uzbekistan provinces. Med. zhur. Uzb. no.8:3-8 Ag '62. (MIRA 16:4)
(LIPIDS) (UZBEKISTAN--ARTERIOSCLEROSIS)

LAZARENKO, L.I.

Comparative evaluation of vascular reactions in nephritis and hypertension in Uzbekistan climate. Kardiologiia 3 no.6:70 N-D '63. (MIRA 17:6)

1. Iz kafedry gospital'noy terapii (zav. - chlen - korrespondent AMN SSSR prof. Z.I. Umidova) lechebnogo fakul'teta Tashkentskogo meditsinskogo instituta.

YEMEL'YANOVA, N.D.; PROKOP'YEV, V.N.; GORDEYEVA, V.N.; LAZARENKO, L.P.; BUBLIYENKO, A.V.; KOZLOVSKAYA, O.L.

Materials on the study of the ticks of the genus Ixodes (family Ixodiae) of northeastern Asia. Dokl. Irk. gos. nauch.-issl. protivochum. inst. no.5:188-193 '63 (MIRA 18:1)

BEME, Yevgeniy Leonidovich; LAZARENKO, M., red.

[Maintenance and current repair of motor vehicles] Tekhnicheskoe obsluzhivanie i tekushchii remont avtomobilei. Alma-Ata, Kazakhstan, 1965. 178 p. (MIRA 18:11)

GRIN', N.Ye.; LAZARENKO, M.A.

Errors attributable to a time limitation on the impulse in a frequency analysis. Geofiz. sbor. no.3:13-18 '62. (MIRA 15:9)
(Seismic prospecting)

L 36347-66 EWT(d)/EWT(l)/EWT(m)/EWP(k)/EWP(w)/EWP(v) IJP(c) EM/GW/WW
ACC NR: AP6007808 SOURCE CODE: UR/0021/66/000/002/0179/0182

AUTHORS: Selezov, I. T.; Lazarenko, M. A.

ORG: Institute of Cybernetics, AN URSR (Instytut Kibernetyky AN URSR); Institute of Geophysics, AN URSR (Instytut geofizyky AN URSR)

TITLE: Scattering and diffraction of elastic waves in a sphere placed in a half-space

SOURCE: AN UkrRSR. Dopovidi, no. 2, 1966, 179-182

TOPIC TAGS: elastic wave, seismic wave, wave diffraction, wave scattering, seismic prospecting

ABSTRACT: The diffraction and scattering of elastic waves on a rigid sphere placed in a half-space has been investigated. The solutions for the scattered field outside the sphere and frequent reflected fields were formulated by using the method of representation. The solutions presented can be used for seismic prospecting. The paper was presented by S.I. Subbotin, Member of Academy of Sciences, Ukrainian SSR. Orig. art. has 1 figure and 24 formulas. [Based on authors' abstract] [NT]

SUB CODE: 20/ SUBM DATE: 10Sep64/ OTH REF: 003

Card 1/1

ONTIN, Ye.I.; LAZARENKO, M.I.

Ways of reducing the dust in the air of coal preparation plants in the Kuznetsk Basin. Bor'ba s sil. 5:254-259 '62. (MIRA 16:5)

1. Vostochnyy nauchno-issledovatel'skiy institut po bezopasnosti rabot v gornoy promyshlennosti.
(Kuznetsk Basin—Coal preparation plants—Safety appliances)
(Dust—Prevention)

LAZARENKO, M.I., inzh.

Investigating the explosiveness of dust in Kuznetsk Basin coal preparation plants. Nauch. soob. VostNII no.1:35-40 '61. (MIRA 18:5)

GEYZENBLAZEN, B.Ye., inzh., GONCHAROV, Yu.G., inzh.; KOLESNIK, A.S.; LAZARENKO, N.A.; DAVIDKOVICH, A.S., inzh.

Automation of a two-stage crushing cycle. Gor. zhur. no.2:54-57 F '65. (MIRA 13:4)

1. Metallurgavtomatika (for Geyzenblazen, Goncharov, Davidkovich). 2. TSentral'nyy gornoobogatitel'nyy kombinat, Krivoy Rog (for Kolesnik, Lazarenko).

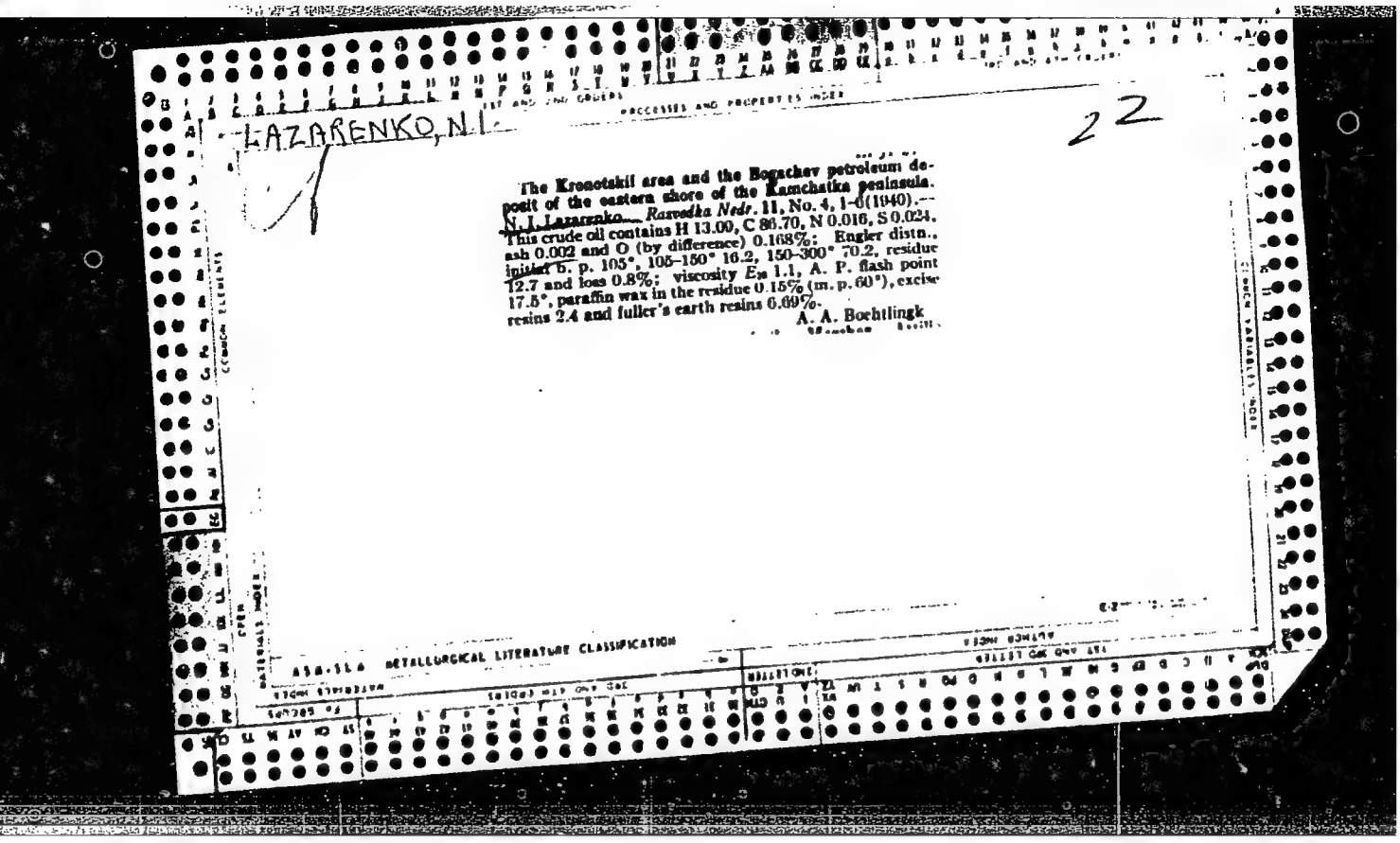
DAVIDKOVICH, A.S.; GONCHAROV, Yu.G.; GEYZENBLAZEN, B.Ye.; BABKOVA, T.B.; PRYADKO, V.D.; BELETSKIY, Ye.P.; KOLESNIK, A.S.; LAZARENKO, N.A.

Analysis of the efficiency of work output of the automated ore dressing section in the Krivoy Rog Central Mining and Ore Dressing Combine. Met. i gornorud. prom. no.4:64 Jl-Ag '65. (MIRA 18:10)

DRUZHININ, I.D.; KONDRATENKO, G.P.; LAZARENKO, N.F.

Bacterial contamination of mine water and viability of dysentery bacteria in such water. Gig. i san. 24 no.9:84-85 S '59.
(MIRA 13:1)

1. Iz kafedry mikrobiologii Stalinskogo meditsinskogo instituta i Stalinskoy gorodskoy sanitarno-epidemiologicheskoy stantsii.
(MINE WATER--BACTERIOLOGY) (SHIGELLA)



LAZARENKO, N.I.

22

The Kronotskii area and the Bogachev petroleum deposit of the eastern shore of the Kamchatka peninsula. N. I. Lazarenko. *Razvedka Nedr*. 11, No. 4, 1-6(1940).—This crude oil contains H 13.00, C 86.70, N 0.016, S 0.024, ash 0.002 and O (by difference) 0.168%; Engler distn., ignition p. 105°, 105–150° 16.2, 150–300° 70.2, residue 12.7 and loss 0.8%; viscosity E_{20} 1.1, A. P. flash point 17.5°, paraffin wax in the residue 0.15% (m. p. 60°), excise resins 2.4 and fuller's earth resins 0.09%.

A. A. Bochtlingk

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

LAZARENKO, N. I.

LAZARENKO, N. I.: "The coal content of the lower carboniferous deposits of the southern wing of the Dnepr-Donets Valley." Acad Sci Ukrainian SSR. Inst of Geological Sciences. Kiev, 1956. (Dissertation for the Degree of Candidate in Geologicomineralogical Science).

Source: Knizhnaya Letopis' No. 28 1956 Moscow

LAZARENKO, N.I.

Coal potential of the lower carboniferous in the southern wing of the Dnieper-Donets Lowland. Geol. zhur. 17 no.4:10-22 '57. (MIRA 11:4)

(Dnieper Lowland--Coal--Geology)
(Donets Basin--Coal--Geology

LAZARENKO, N.I.

Coal potential of the lower Carboniferous in the southern wing of the Dnieper-Donets Lowland. Izv. DGI 29:65-79 '57. (MIRA 11:5)
(Donets Basin--Coal geology) (Dnieper Lowland--Coal geology)

LAZARENKO, N.I.

Relationship between the lithological composition of sediments and coal potential of the lower Carboniferous in the southern part of the Dnieper-Donets Lowland. Izv.vys.ucheb.zav.; geol. i razv. 1 no.6:46-49 Je '58. (MIRA 13:1)

1. Dnepropetrovskiy gornyy institut.
(Coal geology) (Dnieper Lowland--Geology, Stratigraphic)
(Donets Basin--Coal geology)

LAZARENKO, N.I.

Evaluation of reserves and methods of prospecting for deep-lying coal seams in the central Donets Basin. Izv. vys. ucheb. zav.; geol. i razv. 3 no.7:94-102 Jl '60. (MIRA 13:9)

1. Dnepropetrovskiy gornyy institut.
(Donets Basin--Coal geology)

LAZARENKO, N.I.

"Wormy" rocks in the upper Vise of the western Donets Basin. Sov. geol. 3 no.8:131-133 Ag '60. (MIRA 13:9)

1. Dnepropetrovskiy Gornyy institut.
(Donets Basin--Annelida)

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S/123/61/000/022/009/024
A004/A101

AUTHORS: Lazarenko, B.R., Lazarenko, N.I.

TITLE: Electrospark method of producing holes in diamonds

PERIODICAL: Referativnyy zhurnal. Mashinostroyeniye, no. 22, 1961, 64, abstract 22B383 (V sb. "Probl. elektr. obrabotki materialov", Moscow, AN SSSR, 1960, 51 - 57)

TEXT: The authors analyze a method of using electric discharges for the machining of nonconductive materials, in particular diamonds. The method is based on the utilization of energy originating during the abrupt deceleration of the beam of flying electrons by the diamond surface. With this method the manufacturing time of holes in diamond dies is considerably reduced in comparison with mechanical cutting. There are 3 figures, 2 tables and 3 references.

N. Lazarenko

[Abstracter's note: Complete translation]

Card 1/1

LAZARENKO, N.I.

Coal potential of the Middle Carboniferous in the Dnieper Valley and southern Lozovskiy coal regions of the western Donets Basin. Izv.vys.ucheb.zav.; geol.i razv. no.2:41-48 F '62. (MIRA 15:3)

1. Dnepropetrovskiy gornyy institut imeni Artema.
(Donets Basin—Coal geology)

S/856/62/000/000/001/011
E073/E535

AUTHORS: Lazarenko, B.R. and Lazarenko, N.I.

TITLE: Electrodynamic theory of the electric-spark erosion of metals

SOURCE: Problemy elektricheskoy obrabotki materialov. Tsentr. nauchnoissl. labor. elek. obrab. mat. AN SSSR. Ed.by B. R. Lazarenko. Moscow, Izd-vo AN SSSR, 1962,44-51

TEXT: In the first part of the paper the various published theories on the process of electric-spark erosion are reviewed. Recent experimental results mentioned include the following: G. V. Spivak established,by electron microscope studies, intensive refining and deformation of metal crystals in the zone of the electric impulse; L. S. Palatnik showed,by X-ray diffraction methods,that explosive evaporation occurs on the cathode, which is accompanied by mechanical failure, whilst relatively static fusion takes place at the anode; B. N. Zolotykh showed,by high-speed cinematography,that the ejection of the metal occurs after termination of the electric processes; B. I. Stavitskiy established a very interesting dependence between the characteristics of the

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Electrodynamic theory of the ... S/856/62/000/000/001/011
E073/E535

breakdown of the gap, a crater is formed on the surface of the anode caused by the sharp braking effect of the electron beam, and from the edges of the crater material is ejected at a high velocity. The author mentions that his theory also explains the "mystery" of the Tungusska meteorite. There are 5 figures.

Card 3/3

S/856/62/000/000/002/011
E073/E535

AUTHOR: Lazarenko, N.I.

TITLE: Erosiographic method of investigation of the process of destruction of electrodes

SOURCE: Problemy elektricheskoy obrabotki materialov. Tsentr. nauchnoissl. labor. elek. obrab. mat. AN SSSR. Ed.by B. R. Lazarenko. Moscow, Izd-vo AN SSSR, 1962,81-85

TEXT: The method is based on a phenomenon discovered by the author in 1942 that the process of electric erosion of metals is a polar one and that the sign of the process changes on transition from spark to arc discharges. During spark discharges the rate of erosion decreases on approaching the spark/arc boundary, being zero at the boundary itself; from this boundary onwards the polarity of the erosion is reversed and increases in intensity until a continuous maximum is reached, namely, when the arc is stabilised. An instrument based on this method consists essentially of a plate which is moved in the horizontal direction by an electric motor and a rod made to oscillate in the vertical direction by means of a vibrator. The

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operation of the instrument is illustrated for the case of a copper plate used as the cathode and a silver rod used as the anode. In this case, the spark discharge region is characterized by a silvery trace on the red copper plate, whereby the thickness of the trace is a function of the intensity of the mass transfer. This decreases to zero at the inversion point and from then onwards the cathode will be eroded at an increasing intensity as the arc strengthens. The inversion from the spark into the arc discharge range is effected by varying the capacitance in the shunting circuit. This method can be used for determining the stability of various materials to electric erosion, to study the relation between the electric erosion of electrodes and the composition of the gaseous medium in the gap etc. The method proved very useful for testing the behaviour of various contact materials in relays, particularly for determining the required arc quenching capacity. The importance of investigations in this field is increasing with the development of new materials. A further application is the use of this process for producing artistic etchings since it enables not only etching of the material but also deposition of lines of various thickness of

GRECHKIN, N.A.; LAZARENKO, N.I.; SICHEVOY, A.P.; BELIK, V.T.; BREZHNEV, L.A.

Inoculating rolling mill with addition alloys by electric sparks. Met. i gornorud. prom. no.2:77-78 Mr-Ap '65. (MIRA 18:5)

LAZARENKO, N. I. and B. R. LAZARENKO.

Elektricheskaia eroziia metallov. Moskva, Gosenergoizdat, 1944-45. 2 v.

Electric erosion of metals.

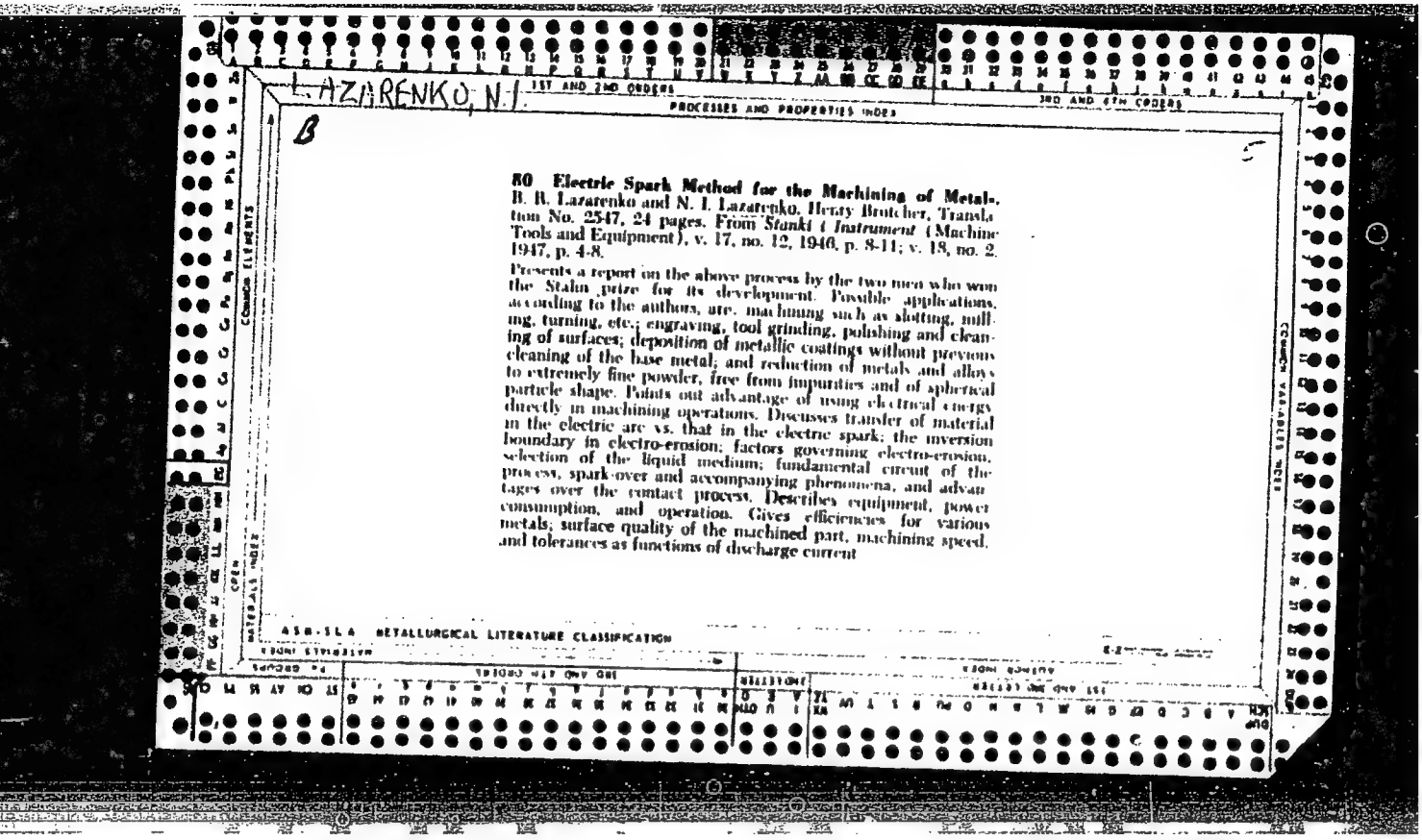
SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

LAZARENKO, N. I. and B. R. LAZARENKO.

Fizika elektroiskrovogo sposoba obrabotki metallov. Moskva, TSBTI Ministerstva elektropromyshlennosti, 1946.

Physics of the electric spark technique in metal working.

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.


LAZARENKO, N.I.

B

80 Electric Spark Method for the Machining of Metal. B. R. Lazarenko and N. I. Lazarenko. Henry Brutcher, Translation No. 2547, 24 pages. From *Stanki i Instrument* (Machine Tools and Equipment), v. 17, no. 12, 1946, p. 8-11; v. 18, no. 2, 1947, p. 4-8.

Presents a report on the above process by the two men who won the Stalin prize for its development. Possible applications, according to the authors, are: machining such as slotting, milling, turning, etc.; engraving, tool grinding, polishing and cleaning of surfaces; deposition of metallic coatings without previous cleaning of the base metal; and reduction of metals and alloys to extremely fine powder, free from impurities and of spherical particle shape. Points out advantage of using electrical energy directly in machining operations. Discusses transfer of material in the electric arc vs. that in the electric spark; the inversion boundary in electro-erosion; factors governing electro-erosion, selection of the liquid medium; fundamental circuit of the process, spark-over and accompanying phenomena, and advantages over the contact process. Describes equipment, power consumption, and operation. Gives efficiencies for various metals; surface quality of the machined part, machining speed, and tolerances as functions of discharge current

LAZARENKO, N. I. and B. R. LAZARENKO.

Electroiskrovaia obrabotka metallov. Moskva, Gosenergoizdat, 1950.
118 2 p. illus.

Bibliography: p. 120.

Electric spark technique in metal working.

DLC: TS213.L3

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

AID P - 2944

Subject : USSR/Electricity

Card 1/2 Pub. 27 - 9/15

Authors : Lazarenko, B. R., Doc. of Tech. Sci., and N. I. Lazarenko, Eng., Moscow

Title : Electrical spark machining of metals

Periodical : Elektrichestvo, 8, 63-68, Ag 1955

Abstract : The authors describe the methods of electrical spark machining of metals introduced in 1938 by the All-Union Electrical Engineering Institute. These methods permit the machining with great precision of all kinds of metals and alloys. The authors see in its future development the possibility of totally replacing heavy and costly machine tools by light and handy electrical spark machine tools. They present the theory of shock impulse technique, give several examples of its application in engineering practice, and describe some types of apparatus of Soviet construction. Ten photographs, 1 diagram, 8 references (1944-1954) (5 Soviet).

LAZARENKO, N. I.;

"Change in the Initial Properties of the Cathode Surface Under the Action of Electric Spark Pulses Flowing in Gaseous Media," Elektroiskrovaya obrabotka metallov (Electrospark Maching of Metals), Moscow, Izd-vo AN SSSR, 1957. 225 p.

In this article the author investigates changes in the properties of a negative electrode resulting from an electrical discharge when electrodes are immersed in a gaseous dialectric, and describes some practical applications of electrical erosion. Both electric spark and electric arc discharges were investigated. The author concludes that any type of electrical discharge is followed by erosion of electrodes and that for each type of electrical discharge there exists a corresponding polarity of erosion.

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Translation from: Referativnyy zhurnal, Mashinostroyeniye, 1959, No. 10, p. 107, # 38011

AUTHORS: Lazarenko, B.R., Lazarenko, N.I.

TITLE: The Up-to-Date Development Level of Electric Spark Treatment of Metals and Some Scientific Problems of This Field

PERIODICAL: Tr. Tsentr. n.-i. labor. elektr. obrabotki materialov. AN SSSR, 1957, No. I, pp. 9-37

TEXT: It is shown that spark discharges with a duration of 10^{-3} sec and shorter can be used. The authors give a description of the mechanism of origination and course of this kind of discharge in gases and liquids. The spark discharge is mainly an electronic process with a sharply "narrowed" (owing to the electronic-optical effect and electrodynamic forces) current-conducting discharge channel. Owing to this, high powers are knocking down on strictly localized sections (of the anode), destroying the electrode. The ejection of metal from the electrode is not only due to the heat effect, but also to the effect of elec-

Card 1/3

The Up-to-Date Development Level of Electric Spark Treatment of Metals and Some Scientific Problems of This Field

trodynamic forces. The anode surface, receiving the current pulse, changes essentially: the crystalline structure is being refined owing to great mechanical stresses, new chemical elements and new phase structures are appearing in the metal composition etc. The metal, ejected into the inter-electrode space, forms a powder of spherical particles of various size. The tests show that only the spark type of discharge is suitable for dimensional machining. It is shown that owing to a delay in the deionization of the working medium in the inter-electrode space, the highest repetition frequency of pulses must not exceed (2-3) x 10^5 pulses per second. The quantity of ejected metal is proportional to the energy of the single pulse and the pulse frequency, and depends on the chemical composition of the anode material. This is confirmed by tabular data for 14 different materials. The authors report on the principal trends in designing installations for electric spark machining. The optimum magnitude of clearance between the electrodes, ensuring the best performance results, are found in capacitor installations. Moreover, this clearance can be maintained by a corresponding adjustment of the electrode-tool feed. The technological operations are

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The Up-to-Date Development Level of Electric Spark Treatment of Metals and Some Scientific Problems of This Field

enumerated which can be efficiently carried out by the electric spark machining method, as well as the most important scientific and technical problems which have to be solved (increasing the average capacity of the installations at pulses which are shorter than 10^{-6} sec, investigating the self-focusing of the pulse, studying the distribution of power between cathode and anode in order to reduce the power liberated from the cathode, using spark pulses for the machining of non-metals, designing automatic electric spark installations etc). There are 17 figures and 9 references.

B.I.A.

Translator's note: This is the full translation of the original Russian abstract.

Card 3/3

LAZARENKO, N.I.

Changes in initial properties of cathode surfaces caused by the action of electric spark impulses taking place in gas media. Trudy TSNIL-ELEKTROM no.1:70-94 '57. (MIRA 11:12)
(Electric discharges through gases) (Electric metal cutting)

LAZARENKO, NATAL'YA IOASAFOVNA

PHASE I BOOK EXPLOITATION 589

Lazarenko, Boris Romanovich, and Lazarenko, Natal'ya Ioasafovna

Elektroiskrovaya obrabotka tokoprovodyashchikh materialov (Electrospark Machining of Conductive Materials) Moscow, Izd-vo AN SSSR, 1958. 183 p. (Series: Akademiya nauk SSSR. Nauchno-populyarnaya seriya) 10,000 copies printed.

Additional Sponsoring Agency: Tsentral'naya nauchno-issledovatel'skaya laboratoriya elektricheskoy obrabotki materialov.

Ed. of Publishing House: Moyzhes, S.M.; Tech. Ed.: Moskvicheva, N.I.; Resp. Ed.: Stoyanov, V.I.

PURPOSE: The purpose of this booklet is to acquaint the general reader with a new application of electricity - the electrospark machining of conductive materials.

COVERAGE: This booklet covers the fundamentals of electrospark machining of conductive materials. It presents basic diagrams

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of electric sparking systems and the principles of construction of electrospark installations. Various operations performed by the electrospark method of machining and the equipment used are illustrated and described in detail. There are 44 references, 24 of which are Soviet, 10 German, 5 French, and 5 English.

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AVAILABLE: Library of Congress

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Card 6/6

SOV/122-58-5-17/26

AUTHORS: Lazarenko, B.R., Doctor of Technical Sciences, Professor, and Lazarenko, N.I., Junior Scientific Assistant

TITLE: Modern Installations for the Electric Spark Machining of Metals (Sovremennyye ustanovki dlya elektroiskrovoy obrabotki metallov)

PERIODICAL: Vestnik Mashinostroyeniya, 1958, Nr 5, pp 65 - 69 (USSR)

ABSTRACT: All generators for electric spark machining store energy during the total cycle time and release it during the much shorter discharge time in the form of polarized electric current impulses. Both electrostatic condenser type and electromagnetic inductance type storage facilities are used. A number of impulse generators of Russian, American, French, British and Swiss design are briefly reviewed. Among the Russian designs, a universal installation, Elektrom-12, a tool-sharpening and surface-finishing machine, type LKZ-37, and an electric spark saw, type LKZ-49, are shown in external photographs. A commutatorless impulse generator developed by the electric machining laboratory of the Ac.Sc. USSR is mentioned. The Elektrom-12 machine consumes 5.6 kW.

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Modern Installations for the Electric Spark Machining of Metals

It can sink dies of up to 30 kg weight, cut through a 50 x 50 mm section, drill holes up to 3 mm dia., cut slots and perform electric spark hardening of surfaces. In the electric tool-sharpening machine, a cast iron disc rotates at 40 rpm and serves as the electrode. When sharpening tools, the tool has a reciprocating motion in the radial direction. The maximum power consumed is 5 kW. When sharpening three flanks of carbide tips of 10 x 20 mm section, 40 tips can be completed in one shift. The electric saw cuts metal by means of a tape or wire wound from one drum to another, moving at 5-10 mm/sec. The wire, made of copper or brass, produces a width of cut between 0.1 and 0.55 mm. The working fluid is solar oil.
There are 6 photographs and 8 references, 4 of which are Soviet, 2 German and 2 English.

Card 2/2 1. Metals--Machining 2. Machine tools--Performance 3. Machine tools--Design

LAZARENKO, N. I.

PHASE I BOOK EXPLOITATION SOV/5186

Akademiya nauk SSSR. Tsentral'naya nauchno-issledovatel'skaya laboratoriya elektricheskoy obrabotki materialov

Problemy elektricheskoy obrabotki materialov (Problems of the Electrical Machining of Materials) Moscow, Izd-vo AN SSSR, 1960. 247 p. Errata slip inserted. 4,200 copies printed. (Series: Its: Trudy)

Sponsoring Agency: Akademiya nauk SSSR. Resp. Ed.: B. R. Lazarenko; Ed. of Publishing House: M. L. Podgoyetskiy; Tech. Ed.: S. P. Golub'.

PURPOSE: This collection of articles is intended for scientists and technicians concerned with the investigation of new ways of applying electrical energy.

COVERAGE: The book contains articles on studies carried out by the staff of the Tsentral'naya nauchno-issledovatel'skaya

Card ~~1/6~~

laboratoriya elektricheskoy obrabotki materialov Akademii nauk SSSR (TsNIL-ELEKTROM AN SSSR) (Central Scientific Research Laboratory for the Electrical Machining of Materials of the AS USSR) in searching for new applications of electrical energy. The results of these studies include: the dimensional machining of dielectrics and the utilization of electric pulsed discharges in carrying out certain chemical reactions, new information on processes occurring on electrodes and in the interelectrode space during short pulsing, and some new data on the technological processes in metal machining by electric current pulses. Much attention is paid to the analysis of the operation of power-supply sources used in the electrical machining and arc welding of metals. No personalities are mentioned. References accompany most of the articles.

TABLE OF CONTENTS:

LAZARENKO, N I.

PHASE I BOOK EXPLOITATION SOV/5289

Akademiya nauk SSSR. Tsentral'naya nauchno-issledovatel'skaya laboratoriya elektricheskoy obrabotki materialov.

Elektroiskrovaya obrabotka metallov (Electric-Spark Machining of Metals) no. 2. Moscow, Izd-vo AN SSSR, 1960. 262 p. Errata slip inserted. (Series: Its: Trudy) 6,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR.

Resp. Ed.: B. R. Lazarenko; Ed. of Publishing House: S. M. Moyzhes; Tech. Ed.: A. P. Guseva.

PURPOSE: This collection of articles is intended for process engineers, and technical and research personnel engaged in the working of metals.

COVERAGE: Problems concerning the most effective application of electric-spark methods in industry are reviewed. Possible future developments in the field of electric-spark machining

Card 1/5

and its automation are discussed, and, for instances of its present utilization in industry, the technical-economic effectiveness of the process is examined, and the equipment involved is described. The relationship between the parameters of electric-spark pulses and the production characteristics (productivity, machining accuracy, and surface quality) of electric-spark machining is established. An electric-spark method is advanced for the curvilinear cutting of materials with a 20 to 30 micron-thick wire, thus directly producing a finished part. Non-Soviet developments in the field of electric-spark machining are also treated. No personalities are mentioned. There are 121 references: 82 Soviet, 20 English, 10 French, 8 German, and 1 Italian. These references accompany individual articles.

TABLE OF CONTENTS:

Electric-Spark Machining of Metals SOV/5289

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Electric-Spark Machining of Metals SOV/5289

Lazarenko, B. R. Developments in Electric-Spark Machining of Conductive Materials in Non-Soviet Countries 242

AVAILABLE: Library of Congress

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7/29/61

Card 5/5

LAZARENKO, N.I. [Lazarenko, M.I.]; PETROV, V.G. [Petrov, V.H.]

Rocks with annelid burrows in the Vise sediments of the western Donets Basin. Geol. zhur. 20 no. 4:91-93 '60. (MIRA 14:4)
(Donets Basin--Rocks, Sedimentary) (Annelida)

S/123/61/000/015/026/032
A004/A101

AUTHOR: Lazarenko, N. I.

TITLE: Technological process of changing the initial properties of metallic surfaces by electric pulses

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 15, 1961, 79, abstract 15B570 ("Tr. Tsentr. n.-i. labor. elektr. obrabotki materialov, AN SSSR", 1960, no. 2, 36-66)

TEXT: The author investigated the effect of electric-spark alloying on the properties of the metal surface (hardness, resistance to wear, fatigue strength, corrosion and heat resistance, and electrical properties). He analyzes the general characteristics which the electric-spark installation should possess, and the conditions under which the electric-spark alloying process of surfaces is carried out in the right way. There are 12 figures and 24 references.

N. Il'ina

[Abstracter's note: Complete translation]

Card 1/1

LAZARENKO, B.R.; LAZARENKO, N.I.

Development of electric spark machining of metals. Vest. AN SSSR 31 no.11:116-117 N '61. (MIRA 14:11)
(Electric metal cutting)

S/030/61/000/011/007/007
B105/B147

AUTHOR: Lazarenko, N. I.

TITLE: Development of electrospark machining of metals

PERIODICAL: Akademiya nauk SSSR. Vestnik, 31, no. 11, 1961, 117-118

TEXT: Two conferences on electrospark machining of metals were held in Moscow from June 19 to 22, 1961. One dealt with the physics of basic processes of the electrospark-machining method, the other with the relevant technology and apparatus. At the second conference, problems of design and production of electrospark devices were discussed, the following reports being mentioned: A. I. Kruglov, on the investigation of the spark gap as load for pulse generators, and the operation of the high-frequency generator for the feeding of electrospark devices, built by V. K. Kravchenko. A. I. Piskunov discussed the technical data and operation of the device of the type "Электром-15" ("Elektrom-15"), built at the Tsentral'naya nauchno-issledovatel'skaya laboratoriya elektroiskrovoy obrabotki materialov (Central Scientific Research Laboratory for the Electrospark Machining of Materials) and having a self-tuning electric copying system; B. I. Stavitskiy

Card 1/2

Development of electrospark...

reported on new designs of electrospark devices; K. I. Ostroverkhov and N. A. Petrova, on calculation and operation of the digital program control device of electrospark devices; G. I. Alkin, A. S. Moyzhes, and D. Ya. Dlugach, on the operation of a multi-circuit electrospark device for the manufacture of all-metal nets and screens; B. N. Zolotykh, on the method of calculating some engineering characteristics of electrospark machining; B. I. Stavitskiy, on the electrospark shaping of surfaces by means of a plain electrode. The perfection of the electrospark-machining method proposed by Ye. V. Kholodnov, under the designation of "reverse copying", permits most accurate coordination of complex surfaces. Collaborators from the industry reported on the use of the electrospark method for the machining of metals in mass production. Finally, the most important trends of development of electrospark machining of metals were discussed.

Card 2/2

L 23393-66 EPF(n)-2/EWT(m)/T/EWP(t) IJP(c) WW/JD/JG

ACC NR: AP6000638 SOURCE CODE: UR/0407/65/000/001/0049/0053

AUTHOR: Lazarenko, N. I. (Moscow)

ORG: none

TITLE: Mechanism of coating formation in electrospark alloying of metal surfaces

SOURCE: Elektronnaya obrabotka materialov, no. 1, 1965, 49-53

TOPIC TAGS: electrospark hardening, case hardening, surface alloying

ABSTRACT: Some experimental data on the physical process of alloying (hardening) a metal surface by electrospark means is reported. A short electric pulse ejects some metal from the anode and leaves a small raised-edge dimple on the cathode. If the alloying electrode is moved with a speed of one dimple diameter per pulse, the resulting cathode surface will be serrated. The smoothest cathode surface has been obtained by moving the electrode with a speed of 1/4 simple diameter per pulse, provided the contacting anode surface is larger than the dimple. Also, the type of percussion effected by the vibrator has an important bearing on the final results. A sharp blow with quick retraction of the electrode yields less transferred metal and an inferior quality of coating. There are optimal softer blow and retraction time which produce the best results; designing a suitable electrokinematic system for attaining optimal conditions is urged. Orig. art. has: 3 figures.

SUB CODE: 13 / SUBM DATE: none / ORIG REF: 005

Card 1/1

LAZARENKO, N.N.

Use aerial methods in oceanographic research. Trudy GOIN (MIRA 13:4)
no.37:85-93 '59.
(Oceanographic research) (Aerial photogrammetry)

LAZARENKO, Nikolay Nikolayevich; PREOBRAZHENSKIY, Yu.V., otv. red. [deceased]; LIVSHITS, B.Kh., red.; FLAUM, M.Ya., tekhn. red.

[Sea level oscillations] Kolebaniia urovnia moria. Leningrad, gidrometeor. Izd-vo, 1961. 106 p. (MIRA 14:9)
(Oceanography)

LAZARENKO, N.N.

Level fluctuations in the Baltic Sea. Trudy GOIN no.65:39-127 '61. (MIRA 14:8)

(Baltic Sea--Hydrography)

S/035/62/000/011/060/079
A001/A101

AUTHOR: Lazarenko, N. N.

TITLE: An experience of using aerial photosurvey for studying currents of the Baltic Sea

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 11, 1962, 19, abstract 11G147 ("Tr. Gos. okeanogr. in-ta", 1962, no. 70, 71 - 87)

TEXT: The author describes results of works on application of aerial photosurvey for observations of currents in the Baltic Sea, performed by the Leningrad branch of the State Oceanographic Institute in 1959 - 1960. Buoys are described, designed in the Leningrad branch, by means of which velocities and directions of currents at various levels were determined by the aerial photosurvey. An experience of using radio geodetic means for determining in flight the linear orientation elements (X_s, Y_s) of aerial photographs of currents is described. There are 6 references.

[Abstracter's note: Complete translation] From author's summary

Card 1/1